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資訊價值對於供應鏈中零售商存貨／缺貨成本之研究

A Study on the Information Value to the Holding/Shortage Cost in the Retailers of Supply Chain

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中文摘要

在一個完整的供應鏈體系中，其成員包含供應商、物流中心、經銷商、零售商與顧客，當顧客向零售商下訂單時，假設某成員發生延遲而無法如期將貨物運送至零售商，此時零售商將無法準確地預估貨物到達的日期，導致與客戶所要求的到貨時間產生差距，因而產生過多的存貨成本或缺貨成本。然而現今資訊科技蓬勃發展，資訊整合技術之運用日漸成熟，使得資訊在企業間能快速傳遞，進而有效地降低企業之存／缺貨成本。因此，本研究以零售商的角度模擬貨物從供應商至零售商的運送時間，在資訊整合與未整合的架構下，用計量的方式來評估資訊價值之差異，再導入一般成本模式(其成本之目標函數包含零售商本身之存貨成本或缺貨成本)，即可得知模擬後的成本差異，進而證明資訊整合可有效使得零售商的成本降低，增加其競爭力，避免長鞭效應的發生。

關鍵字：供應鏈管理；資訊價值；存貨成本；缺貨成本；長鞭效應

Abstract

The member of supply chain includes the supplier, distribution center, consignee, retailers and customers. When the delay in any one of them has occurred, the arrival date of goods is not on time. It causes the difference between arrival date and customers' request, which resulting in the holding cost or shortage cost. Recently, the information technology is getting rising and focused. It makes the delivery of information more accurate and in time. It then provides a way to reduce the holding cost and shortage cost. This study simulates the time of delivery from the supplier to the retailer, and explains the difference of the value of information between information-integrated architecture and non-integrated architecture in quantitative, which then lead into general cost model. This paper provides the evidence to support information-integrated architecture, which enable reduce the cost of retailers efficiently, increase competition and avoid bullwhip effect.

Key words : Supply chain management; Information value; Holding cost; Shortage cost; Bullwhip effect